

## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

### Amino Polyol Amine Oxidase Polynucleotides and Related Polypeptides and Methods of Use

—the specification of which (check one) —

☐  
☒

is attached hereto

was filed on September 8, 2000 as Application Serial No. 09/658,835 and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is known by me to be material to patentability as defined in Title 37, Code of Federal Regulations §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign or provisional application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

### PRIOR FOREIGN APPLICATION(S)

NUMBER	COUNTRY	MONTH/DAY/YEAR FILED	PRIORITY CLAIMED

I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s) listed below and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the

first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is known by me to be material to patentability as defined in Title 37, Code of Federal Regulations §1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	FILING DATE	STATUS: PATENTED, PENDING, ABANDONED
09/352,159	7/12/99	Pending
60/135,391	5/21/99	Abandoned
60/092,936	7/15/98	Abandoned
09/352,168	7/12/99	Pending

I hereby appoint as my attorneys and/agents, with full powers of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Debra L. Blair  
Jean M. Bromert  
Catherine D. Brooke  
Karen Moon Bruce  
Steven J. Callistein  
Amy L. Cigan  
Herbert H. Jervis  
Kathryn K. Lappegard  
Marianne H. Michel  
David B. Ran  
Patricia A. Sweeney  
Karen K. Varley

Registration No. 39,112  
Registration No. 42,362  
Registration No. 44,041  
Registration No. 42,366  
Registration No. 43,525  
Registration No. 45,494  
Registration No. 31,171  
Registration No. 46,857  
Registration No. 35,286  
Registration No. 38,589  
Registration No. 32,733  
Registration No. 45,751

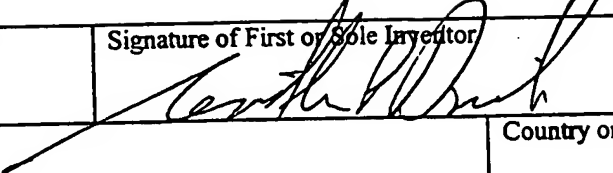
Send Correspondence to:

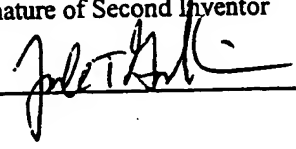
Karen Moon Bruce  
Patent Counsel  
7100 N.W. 62<sup>nd</sup> Avenue  
P.O. Box 1000  
Johnston, Iowa 50131-1000

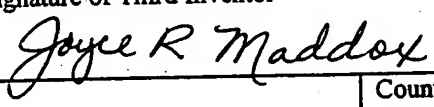
Direct telephone calls to:

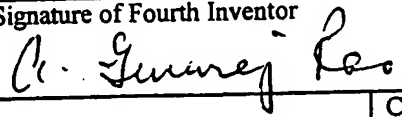
Karen Moon Bruce  
(515) 248-4879

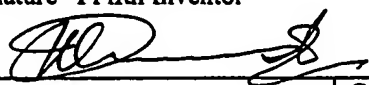
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

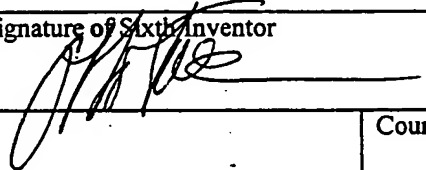
Full Name of First or Sole Inventor	Signature of First or Sole Inventor	Date
Jonathan P. Duvick		1-16-01
Residence Address	Country or Citizenship	
1707 - 38th Street, Des Moines, Iowa	United States of America	
Post Office Address		

Full Name of Second Inventor	Signature of Second Inventor	Date
Jacob T. Gilliam		1/16/01
Residence Address	Country or Citizenship	
1004 Meadow Drive, Norwalk, Iowa	United States of America	
Post Office Address		

Full Name of Third Inventor	Signature of Third Inventor	Date
Joyce R. Maddox		01-08-01
Residence Address	Country or Citizenship	
1312 N. 126th Street, Omaha, Nebraska	United States of America	
Post Office Address		

Full Name of Fourth Inventor	Signature of Fourth Inventor	Date
Aragula Gururaj Rao		1/16/01
Residence Address	Country or Citizenship	
4734 - 74th Street, Urbandale, Iowa	United States of America	
Post Office Address		

Full Name of Fifth Inventor	Signature of Fifth Inventor	Date
Oswald R. Crasta		12/12/00
Residence Address	Country or Citizenship	
95-2C Florence Road, Branford, CT	India	
Post Office Address		

Full Name of Sixth Inventor	Signature of Sixth Inventor	Date
Otto Folkerts		12/12/00
Residence Address	Country or Citizenship	
29 Arrowhead Drive, Guilford, CT	Netherlands	
Post Office Address		



11348  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APRIL 13, 2001

PTAS  
PIONEER HI-BRED INTERNATIONAL, INC.  
KAREN MOON BRUCE  
7100 N.W. 62ND AVENUE  
P.O. BOX 1000, CORPORATE I.P.  
JOHNSTON, IOWA 50131-1000



\*101604011A\*

**DOCKETED**

APR 27 2001

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/19/2001

REEL/FRAME: 011477/0537  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
CRASTA, OSWALD R.

DOC DATE: 12/12/2000

ASSIGNOR:  
FOLKERTS, OTTO

DOC DATE: 12/12/2000

ASSIGNEE:  
CURAGEN CORPORATION  
555 LONG WHARF DRIVE  
11TH FLOOR  
NEW HAVEN, CONNECTICUT 06511

SERIAL NUMBER: 09658835  
PATENT NUMBER:

FILING DATE: 09/08/2000  
ISSUE DATE:

MARCUS KIRK, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

02-05-2001

ATTORNEY DOCKET NO. 1134R

FORM PTO-1595

RECORD

P.



101604011

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Oswald R. Crasta and Otto Folkerts

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

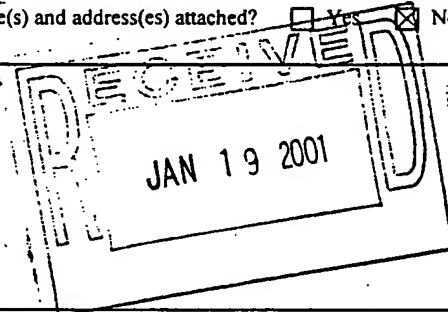
## 2. Name and address of receiving party(ies)

CuraGen Corporation  
555 Long Wharf Drive  
11<sup>th</sup> Floor  
New Haven, Ct 06511Additional name(s) and address(es) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☒ Assignment  
☐ Security Agreement  
☐ Other

- ☐ Merger  
☐ Change of Name

Execution Date: December 12, 2000

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

09/658,835

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Karen Moon Bruce  
Pioneer Hi-Bred International, Inc.  
Corporate Intellectual Property  
7100 N.W. 62<sup>nd</sup> Avenue  
P.O. Box 1000  
Johnston, Iowa 50131-10006. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41) \$40.00

- ☐ Enclosed  
☒ Authorized to be charged to deposit account

8. Deposit account number: 16-1852

(Attach a duplicate copy of this page if paying by deposit account)

02/02/2001 DBYRNE 00000143 161852 09658835

01 FC:581

40.00 CH

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Karen Moon Bruce  
 Name of Person Signing

Karen Moon Bruce  
 Signature

1/17/01  
 Date

Total number of pages including cover sheet, attachments, and document: 4

## ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in fulfillment of a pre-existing obligation of assignment, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, as indicated below, unto

CuraGen Corporation  
555 Long Wharf Drive  
11<sup>th</sup> Floor  
New Haven, CT 06511

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in **"Amino Polyol Amine Oxidase Polynucleotides and Related Polypeptides and Methods of Use"**

as set forth in this United States Patent Application.

- ☐ executed concurrently herewith  
☐ executed on  
☒ Serial No. 09/658,835 filed September 8, 2000

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents,

photographs, models, samples or other physical exhibits which may be of said inventions, and to testify in any proceedings relating to said inventions, patent applications, Letters Patent.

The undersigned hereby grant an authorized representative of Assignee the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

12/12/00  
Date

[Signature]  
Oswald R. Crasta

State of Connecticut )  
County of New Haven )

ss.

I certify that I know or have satisfactory evidence that Oswald R. Crasta is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated 12/12/00

Signature of Notary Public [Signature]

Printed Name JENELL MARIE LAWSON

My appointment expires 2/28/04

**JENELL MARIE LAWSON**  
**NOTARY PUBLIC**  
**MY COMMISSION EXPIRES FEB. 28, 2004**



12/12/00  
Date

[Signature]  
Otto Folkerts

State of Connecticut )

County of New Haven )

ss.

I certify that I know or have satisfactory evidence that Otto Folkerts is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated 12/12/00

Signature of Notary Public [Signature]

Printed Name Jenell Marie Lawson

My appointment expires 2/28/04

JENELL MARIE  
NOTARY PUBLIC  
MY COMMISSION EXPIRES FEB. 28, 2004



1134R

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APRIL 13, 2001

PTAS  
PIONEER HI-BRED INTERNATIONAL, INC.  
KAREN MOON BRUCE  
CORPORATE INTELLECTUAL PROPERTY  
7100 N.W. 62ND AVENUE, P.O. BOX 1000  
JOHNSTON, IOWA 50131-1000



\*101604012A\*

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UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

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RECORDATION DATE: 01/19/2001

REEL/FRAME: 011477/0522  
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
DUVICK, JONATHAN P.

DOC DATE: 01/16/2001

ASSIGNOR:  
GILLIAM, JACOB T.

DOC DATE: 01/16/2001

ASSIGNOR:  
MADDOX, JOYCE R.

DOC DATE: 01/08/2001

ASSIGNOR:  
RAO, ARAGULA GURURAJ

DOC DATE: 01/16/2001

ASSIGNEE:  
PIONEER HI-BRED INTERNATIONAL,  
INC.  
7100 N.W. 62ND AVENUE  
P.O. BOX 1000  
JOHNSTON, IOWA 50131-1000

SERIAL NUMBER: 09658835  
PATENT NUMBER:

FILING DATE: 09/08/2000  
ISSUE DATE:

011477/0522 PAGE 2.

MARY BENTON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

02-05-2001

ATTORNEY DOCKET NO. 11

FORM PTO-1595

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EET

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

101604012

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

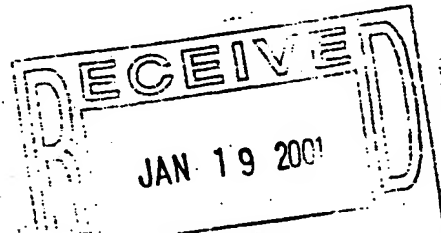
Jonathan P. Duvick, Jacob T. Gilliam, Joyce R. Maddox, and Aragula Gururaj Rao

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party(ies)

Pioneer Hi-Bred International, Inc.  
Corporate Intellectual Property  
7100 N.W. 62<sup>nd</sup> Avenue  
P.O. Box 1000  
Johnston, Iowa 50131-1000Additional name(s) and address(es) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment  
☐ Security Agreement  
☐ Other☐ Merger  
☐ Change of NameExecution Date: January 16, 2001 and January 8, 2001

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

09/658,835

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Karen Moon Bruce  
Pioneer Hi-Bred International, Inc.  
Corporate Intellectual Property  
7100 N.W. 62<sup>nd</sup> Avenue  
P.O. Box 1000  
Johnston, Iowa 50131-10006. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41) \$40.00☐ Enclosed  
☒ Authorized to be charged to deposit account8. Deposit account number: 16-1852

(Attach a duplicate copy of this page if paying by deposit account)

02/02/2001 DBYRNE 00000142 161852 09658835

01 EC-501 40.00 CH

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## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Karen Moon Bruce  
Name of Person SigningKaren Moon Bruce  
Signature1/17/01  
DateTotal number of pages including cover sheet, attachments, and document: 5

## ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in fulfillment of a pre-existing obligation of assignment, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, as indicated below, unto

PIONEER HI-BRED INTERNATIONAL, INC.  
800 Capital Square  
400 Locust Street  
Des Moines, Iowa 50309

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in "**Amino Polyol Amine Oxidase Polynucleotides and Related Polypeptides and Methods of Use**"

as set forth in this United States Patent Application

☐

executed concurrently herewith

☐

executed on

☒

Serial No. 09/658,835 filed September 8, 2000

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be of said inventions, and to testify in any proceedings relating to said inventions, patent applications, Letters Patent.

The undersigned hereby grant an authorized representative of Assignee the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

Jan 16 2001  
Date

Jonathan P. Duvick  
Jonathan P. Duvick

State of Iowa

County of Polk

ss.

I certify that I know or have satisfactory evidence that Jonathan P. Duvick is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated Jan. 16, 2001

Signature of Notary Public Ginny Boesen


Printed Name Ginny Boesen

My appointment expires



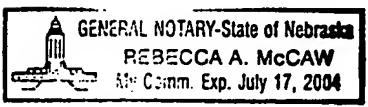
Date 01/16/01 Jacob T. Gilliam  
Jacob T. Gilliam  
State of Iowa  
County of Polk )  
SS.

I certify that I know or have satisfactory evidence that Jacob T. Gilliam is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated Jan 16, 2001  
Signature of Ginny Boesen  
Notary Public  
Printed Name Ginny Boesen  
My appointment expires 

01-08-01 Joyce R Maddox  
Date Joyce R. Maddox  
State of Nebraska  
County of Douglas )  
SS.

I certify that I know or have satisfactory evidence that Joyce R. Maddox is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

 Dated 01-08-01  
Signature of Rebecca A. McCaw  
Notary Public  
Printed Name Rebecca A. McCaw  
My appointment expires 07-17-04

1/16/00  
Date

A. Gururaj Rao  
Aragula Gururaj Rao

State of Iowa

County of Polk

ss.

I certify that I know or have satisfactory evidence that Aragula Gururaj Rao is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated Jan 16, 2001

Signature of  
Notary Public

Ginny Boesen

Printed Name

Ginny Boesen

My appointment expires

